DRAFT #20

Draft 2009 *International Plumbing Code* & 2009 *International Fuel Gas Code*/Local Amendments

AN ORDINANCE

AMENDING CHAPTER 24, PLUMBING, OF THE CITY CODE OF SAN ANTONIO, TEXAS, AND ADOPTING A NEW CHAPTER 24 ENTITLED "PLUMBING AND FUEL GAS;" ADOPTING THE 2009 EDITIONS OF BOTH THE INTERNATIONAL PLUMBING CODE AND THE INTERNATIONAL FUEL GAS CODE PLUS EACH CODE'S RESPECTIVE LOCAL AMENDMENTS; AND PROVIDING FOR PENALTIES, PUBLICATION AND AN EFFECTIVE DATE.

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WHEREAS, the Department of Planning and Development Services currently enforces the 2006 edition of the *Uniform Plumbing Code* published by the International Association of Plumbing and Mechanical Officials and the local amendments thereto; and

WHEREAS, the 2009 editions of the *International Plumbing Code* (IPC) and the *International Fuel Gas Code* (IFGC) published by the International Code Council have been published; and

WHEREAS, the Plumbing Appeals and Advisory Board and city staff have conducted public meetings regarding the adoption of the 2009 IPC and IFGC and amendments thereto on _____; and

WHEREAS, the Infrastructure and Growth Council Committee held public hearings on the adoption of the 2009 IPC and IFGC and amendments thereto on _____; and

WHEREAS, all prerequisites required by state statute and City Charter for adoption of this code and its amendments have been satisfied; **NOW THEREFORE**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1: Chapter 24 entitled "Plumbing" of the City Code of San Antonio, Texas is renamed the "Plumbing and Fuel Gas Code."

SECTION 2: Section 24-1 entitled "Title of Chapter" is renamed "Title and Intent of Chapter; Process for technical code adoption" and said section is amended by underlined (added) and stricken (~~deleted~~) language below:

Sec. 24-1. Title and Intent of Chapter; Process for technical code adoption.

a) This chapter shall be known as the Plumbing and Fuel Gas Code. Unless otherwise indicated by its use or context, the term "this code" shall refer to this chapter.

~~**[Sec. 24-2. Purpose of Plumbing Code and process for technical code adoption.]**~~

b) ~~[(a)]~~ The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing and fuel gas equipment and systems. ~~[Purpose. This code, including any adopted technical code and amendments, shall be construed to provide minimum standards to safeguard public safety, health and general welfare.]~~

c) ~~[(b)]~~ Process for technical code adoption.

a. Within 180 days of the availability for local public review and purchase of the adopted state plumbing and fuel codes promulgated by the International Code Council and the International Association of Plumbing and Mechanical Officials, the code official ~~[the Plumbing Appeals and Advisory Board ("Board")]~~ as defined and described below, shall, ~~[may,]~~ after conducting public hearings before the Plumbing and Fuel Gas Appeals and Advisory Board, propose an updated plumbing code and new fuel gas code for City Council consideration and possible adoption. ~~[,review and select a plumbing code for City Council consideration and possible adoption, and may develop, after further public hearings, local amendments to the plumbing code for recommendation to the City Council. The 180 day timeframe may be extended for due cause.]~~

~~[b. Once the Board has voted to recommend a plumbing code and any local amendments for City Council consideration, the Director of Development Services shall have the responsibility to make timely recommendations of the proposed code and any local amendments to the City Council.]~~

b. ~~[c]~~ Upon City Council action to adopt the proposed plumbing and fuel codes ~~[code]~~ and any local amendments as evidenced by the passage of a duly authorized ordinance, and after the requisite time period has passed as

required by law, the proposed plumbing and fuel codes ~~[code]~~ and any local amendments shall be in effect as the official plumbing and fuel codes ~~[code]~~ for the City of San Antonio.

Sec. 24-2 ~~[Sec. 24-3]~~ through 24-10 reserved.

SECTION 3: Section 24-11 of the City Code entitled "Uniform Plumbing Code adopted" is amended by renaming said section "International Plumbing Code adopted" and adopting delineated chapters and appendices of the 2009 edition of the International Plumbing Code as the plumbing code for the City of San Antonio. Changes are identified by underlined (added) and stricken (~~deleted~~) language below:

Sec. 24-11. *International ~~[Uniform]~~ Plumbing Code* adopted.

The 2009 edition of the *International Plumbing Code*, Chapters 1 through 13 and Appendices B through G as promulgated by the International Code Council is hereby adopted as the plumbing code of the City of San Antonio. ~~[Chapters 1 thru 16 and Appendixes A, B, D, E, I, K and L of the 2006 edition of the Uniform Plumbing Code, are hereby adopted as the plumbing code of the city.]~~

SECTION 4. Chapter 24 of the City Code of San Antonio, Texas is hereby amended by repealing the local amendments to the Uniform Plumbing Code and adding local amendments to the 2009 edition of the IPC. Changes are identified by underlined (added) and stricken (~~deleted~~) language below:

Sec. 24-12. Amendments.

Section 101.2, Scope, of the IPC is amended to delete the Exception as follows:

101.2 Scope. The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems within this jurisdiction. This code shall also regulate nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel-gas-fired water heaters and water heater venting systems shall be regulated by the *International Fuel Gas Code*. Provisions in the appendices shall not apply unless specifically adopted.

~~**[Exception.** Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.]~~

Section 101.3, Intent, of the IPC is amended to read as follows:

101.3 Intent. The purpose of this *code* is to provide minimum standard to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of *plumbing* equipment and systems. The *code* shall be governed by common sense. An installation or design that is found to not comply with the provisions of the *code* shall not be deemed a violation if the installation or design conforms to the intent of the *code* as determined by the *code official*. If such determinations should be applicable to *plumbing* installations in general, the *code official* shall publish the determination and include it in the next adoption of local amendments.

SECTION 103, DEPARTMENT OF PLUMBING INSPECTION, and Section 103.1, General, of the IPC are amended to read as follows:

SECTION 103 (IPC)
DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES ~~PLUMBING INSPECTION~~

103.1 ~~General.~~ Enforcement agency. The ~~department of plumbing inspection~~ Department of Planning and Development Services shall be the enforcement agency for the *International Plumbing Code*, ~~is hereby created and the executive official in charge~~ and the director thereof shall be known as the *code official* and building official.

Section 103.4, Liability, of the IPC is amended by amending the last sentence of the second paragraph of that section to read as follows:

The *code official* or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code~~.~~, and any officer of the Department of Planning and Development Services, and appointees of the city, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.

Section 106.6, Fees, and sections 106.6.1 through 106.6.3 of the IPC are repealed in their entirety and replaced with new Section 106.6, and various subsections to read as follows:

106.6. Fees.

106.6.1. Payment of Fees. A permit or registration shall not be valid until fees prescribed by City Ordinance have been paid. Nor shall an amendment to a permit or license be released until the additional fee, if any, has been paid.

106.6.2. Schedule of permit and registration fees. A fee for each permit or registration shall be paid as required, in accordance with the fee schedule as established by City Ordinance.

106.6.3. Work commencing before permit issuance. Any person who commences any work before obtaining the necessary permits shall be subject to an additional fee established by the fee schedule as established by City Ordinance.

106.6.4. Related fees. The payment of the fee for a registration or the construction, alteration, removal or demolition work done in connection with, or concurrently with, the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law or City Ordinance.

106.6.5. Refunds. The code official is authorized to establish a refund policy.

IPC subsections 109.1 and 109.2 under Section 109, Means of appeal, is amended and subsection 109.1.1 entitled "Limitation of Board authority" is added to read as follows:

SECTION 109
MEANS OF APPEAL

109.1 Application for appeal. Any person shall have a right to appeal a decision of the *code official* to the Plumbing and Fuel Gas Appeals and Advisory Board. ~~[Board of appeals.]~~ An application for appeal shall be based on the claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the Department of Planning and Development Services ~~[code official]~~ within 20 days after the notice was served. A fee in the amount set by ordinance shall accompany such appeal.

109.1.1 Limitation of board authority. The *board* shall have no authority relative to interpretation of the administration of this *code* nor shall such *board* be empowered to waive requirements of this *code*. The *board* may review plumbing and gas issues when requested to do so by the *code official* and shall provide a recommendation to the *code official* on same. The *board* may also review and make recommendations to the *code official* on any plumbing and/or gas issue requested by a citizen or *board* member when the request for *board* review is approved by both the *code official* and *board* chairman. The responsibilities of the *board* shall be limited to those specifically contained in this chapter.

109.2 Membership of board. The *board* shall consist of eleven (11) members, the *code official* or his designated representative, a representative from the Metropolitan Health District, a representative from the San Antonio Water System and a representative from the City Public Service Board. The later four shall be ex-officio members of said *board*, but shall have no vote on any matter before the *board*. The *board* shall be subject to City

Code Chapter 2, Article IX entitled "Boards and Commissions", to the extent not in conflict with these provisions. The *board* shall adopt rules of procedure for conducting its business that are not in conflict with the City's Rules for Boards and Commissions and shall render all decisions and findings in writing to the appellant with copies to the *code official*. Each application to the *board* shall be accompanied by a filing fee as set forth in the fee schedule adopted by the *city*. ~~[The Board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years, one for 4 years, one for 3 years, one for 2 years and one for 1 year. Thereafter, each new member shall serve for 5 years or until a successor has been appointed.]~~

IPC subsections 109.2.1 through 109.2.6 and section 109.3 are repealed in their entirety and replaced with new subsections 109.2.1 through 109.2.4 and section 109.3 to read as follows:

109.2.1 Chairman. The *board* shall annually select one of its members to serve as chairman and one of its members to serve as vice-chairman.

109.2.2 Disqualification of member. A member shall not hear an appeal in which that member has a personal, professional or financial interest. Where charges are initiated against a member of the *board*, such member shall not sit as a member of the *board* during the hearing of the case. The *board* shall abide by the City Ethics Code.

109.2.3 Secretary. The *code official* shall designate a qualified clerk from the *department* to serve as secretary to the *board*. The secretary shall file a record of the minutes of all *board* proceedings in the office of the city clerk.

109.2.4 Removal of board members. Any *board* member found guilty of a violation of this *code* or who fails to perform his duty as a *board* member shall be recommended for removal from the *board*. Any member who fails to attend two (2) consecutive meetings may be recommended for removal from the *board* unless formally excused by action of the remaining *board* members. Recommendation for removal from the *board* requires six (6) votes. The city manager shall be advised of these actions and recommendations of the *board* for necessary action.

Section 109.3 Notice of meeting. The *board* shall meet upon notice from the chairman, within twenty (20) days of the filing of an appeal, or at stated periodic meetings.

Section 109.4 Open hearing. All hearings before the *board* shall be open to the public. The appellant, the appellant's representative, the *code official* and any person whose interests are affected shall be given an opportunity to be heard.

IPC subsection 109.4.1 Procedure through section 109.7 Court review are hereby repealed in their entirety and replaced with new subsection 109.4.1 Rules of procedure through 109.7 Appeals from Board's actions to read as follows:

Section 109.4.1 Rules of procedure. The meetings of the *board* shall be conducted in conformity with Robert's Rules of Order. Any other rules of procedures adopted by the *board* shall be made available to the public through the secretary under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence but shall mandate that only relevant information be received.

Section 109.4.2 Quorums and majority vote.

109.4.2.1 Six (6) appointed members shall constitute a quorum.

109.4.2.2 The vote of a majority of the members present shall be necessary for adoption of any matter. Each member of the *board* shall have one (1) vote.

109.5 Postponed hearing. If there is no quorum, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

109.6 Board decision. The *board* shall modify or reverse the decision of the *code official* by a concurring vote of a majority of appointed *board* members present.

109.6.1 Resolution. The decision of the *board* shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.

109.6.2 Administration. The *code official* shall take immediate action in accordance with the decision of the *board*.

109.7 Appeals from board's actions. Any action of the *board* may be appealed by a person directly interested, affected, or aggrieved in the action by written petition filed with the *board* and the city clerk within twenty-one (21) days of such action for a hearing before the City Council. A fee in the amount set by ordinance shall accompany such appeal.

Section 202, DEFINITIONS, of the IPC is amended by repealing definitions for "Code" and "Code Official" and adding the listed definitions below:

BOARD. The Plumbing and Fuel Gas Appeals and Advisory Board of the City of San Antonio also known as the board of appeals.

CITY. The City of San Antonio, Texas.

CODE. Chapter 24 of the City Code of San Antonio, Texas, also known as the *Plumbing and Fuel Gas Code of the City of San Antonio*, and any subsequent enactments, amendments and/or reenactment of chapter 24, City Code of San Antonio, Texas.

CODE OFFICIAL. The Director of the Department of Planning and Development Services or a duly authorized representative to act on his behalf. The code official shall also be known as the building official.

DEPARTMENT. The Department of Planning and Development Services of the City.

DWV. Drain, waste and vent.

GREASE TRAP INTERCEPTOR. A plumbing appurtenance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils, and greases (FOG) from a wastewater discharge and is identified by retention time, baffle(s), a minimum of two compartments, a minimum total volume of 500 gallons, and gravity separation. Gravity grease interceptors are generally installed outside.

IPC. The 2009 edition of the *International Plumbing Code*.

JOURNEYMAN PLUMBER. An individual, licensed with the State of Texas as a journeyman plumber, who works under the general supervision of a master plumber and who works on behalf of a plumbing contractor while performing "Plumbing Work" as defined in this code.

LICENSED BACKFLOW ASSEMBLY TESTER. An individual, licensed by *TCEQ* as a *backflow* assembly tester.

MASTER PLUMBER. An individual, licensed in the State of Texas as a master plumber who, on behalf of a plumbing contractor, performs "Plumbing Work" as defined by this code.

PLUMBER'S APPRENTICE. An individual other than a *master plumber*, *journeyman plumber*, or *tradesman plumber*-limited license holder who, as the person's principal occupation, learns about and assists in the installation of *plumbing*, has fulfilled the requirements of and is registered by the board, and works under the supervision of a *master plumber* and the direct supervision of a licensed plumber.

PLUMBING WORK. Any labor or material used in installing, maintaining, or modifying a plumbing system and the appurtenances, apparatus, or equipment used in connection with the use of plumbing in, on, outside, or attached to a building, residence, structure, property, or premises.

RECYCLED WATER. Water that, as a result of a tertiary treatment of domestic wastewater by a public agency, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. The level of treatment and quality of the reclaimed/recycled water shall be approved by TCEQ.

RECLAIMED WATER. Water from sources such as rainwater harvesting, A/C condensate collection, carwashes, ponds, lakes, rivers or other sources as *approved* by the *code official*.

RP DEVICE. See definition of Reduced Pressure Principle Backflow Preventer.

SAWS. San Antonio Water System (http//:saws.org/).

STATE. Texas.

TCEQ. Texas Commission on Environmental Quality (http//:www.tceq.state.tx.us/).

TRADESMAN PLUMBER. An individual, licensed with the *state* as a tradesman plumber, who works under the general supervision of a *master plumber* and who works on behalf of a *plumbing* contractor while performing *plumbing work* on residential construction as defined in *State* Licensing Law.

IPC section 106.4, By whom application is made, is amended by adding subsections 106.4.1 and 106.4.2 as follows:

106.4 By whom application is made. Application for a permit shall be made by the person or agent to install all or part of any plumbing system. The applicant shall meet all qualifications established by statute, or by rules promulgated by this code, or by ordinance or by resolution. The full name and address of the applicant shall be stated in the application.

106.4.1 Authorization to obtain permits. The following lists those individuals, contractors and companies that are authorized to obtain plumbing permits:

1. Any duly licensed master plumber. See Section 106.4.2 for insurance requirements.

2. Any homeowner performing plumbing work on a homestead wherein he/she resides. The installation is to be made by the homeowner without the assistance of any person or persons.

3. Licensed irrigators, who have a state irrigators license, for the installation of backflow devices for irrigation systems.

4. Water softener companies that hold a Class III Texas Commission of Environmental Quality (TCEQ) license for the installation or change out of water softeners and associated equipment.

5. Licensed fire line contractors for backflow devices on fire lines.

6. Plumbing work performed by anyone who is regularly employed or acting as a maintenance man or maintenance engineer, incidental to and in connection with the business in which he is employed or engaged, and who does not engage in plumbing work for the general public. See state licensing law for definition of maintenance person or maintenance engineer.

   Exceptions:

   a. Any person who is employed by the railroad for plumbing work done upon the premises or equipment of the railroad and who does not engage in plumbing work for the general public.

   b. Any person engaged by any public service company for plumbing work in connection with laying, maintaining and the operation of its service mains or lines and the installation, alteration, adjustment, repair, removal or renovation of all types of appurtenances, equipment and appliances directly related to public service companies, properties and/or jurisdiction.

7. Gas work performed by a certified LP gas installer licensed under chapter 113, Natural Resources Code, as amended (limited to underground service piping from the tank to the building or pool heater).

106.4.2 Insurance. Before any person shall engage in *plumbing* work within the *city*, such person shall provide a certificate of insurance issued by an insurance company authorized and admitted to do business in the *state* for commercial general liability insurance and products completed operations coverage for master plumber for claims for property damage or bodily injury, regardless of whether the claim arises from a negligence claim or on a contract claim, and shall be in a coverage amount of not less than $300,000 for all claims arising in any one year period. Further, any persons engaged in *plumbing* work shall indemnify and hold harmless the *city* from any and all damages, claims, liens or losses, including, but not limited to personal injury or death and property damage, arising from any acts or omission of any character whatsoever caused by such person, his agents or employees, engaged in *plumbing* work.

Section 301.3, Connections to drainage systems, of the IPC is amended by amending the title and by adding an exception to read as follows:

301.3 Connections to ~~sanitary~~ drainage system. All plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect wasted systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an *approved* gray water system or recycled water system for flushing of water closets and urinals or for subsurface landscape irrigation in accordance with Appendix C of this code.

Section 301.8, Accessible openings, is a new section of the IPC to be added as follows:

301.8 Accessible openings. When accessible openings are required by this *code*, they shall be a minimum of 12 inches x 12 inches (305 mm x 305 mm) in dimension unless otherwise approved by the *code official*.

Section 304.4, Openings for pipes, is amended as follows:

304.4 Openings for pipes. In or on structures where openings have been made in walls, floors or ceilings for the passage of pipes, such openings shall be closed and protected by the installation of *approved* metal collars that are securely fastened to the adjoining structure or sealed with an *approved* method or material.

Section 305.6, Freezing, of the IPC is amended as follows:

305.6. Freezing. Water, soil and waste pipes shall not be installed outside of a building, in attics or crawl spaces, concealed in outside walls, or in any other place subjected to freezing temperatures unless adequate provision is made to protect such pipes from freezing by insulation or heat or both. Piping that is under 4 inches (102 mm) nominal of insulation is considered protected from freezing. Exterior water supply system piping shall be installed not less than 6 inches (152 mm) below the frost line and not less than 12 inches (305 mm) below grade.

Section 305.6.1, Sewer depth, of the IPC is amended to establish the minimum sewer depths as follows:

305.6.1 Sewer depth. ~~Building sewers that connect to private sewage disposal systems shall be a minimum of [NUMBER] inches (mm) below finished grade at the point of septic tank connection.~~ Building sewers shall be a minimum of 12 ~~[NUMBER]~~ inches (304 mm) below grade.

Section 306.1, Support of piping, of the IPC is amended as follows:

306.1 Support of piping. Buried piping shall be supported throughout its entire length. Where support is otherwise provided, it shall comply with Table 308.5 and not exceed 24 inches (610 mm) above ground. Two steel rods that are crisscrossed and tied to pipe with wire and spaced per Table 308.5 will be required on horizontal piping raised above ground. When outside the footprint of the *building*, no *plumbing*, gas, *sewer* or water piping shall be installed in the same ditch with electric lines unless a separation of 36 inches (914 mm) horizontally is maintained.

Subsection 312.1.1 Test gauges, of the IPC is amended with numbers 1 through 3 remaining as published in the IPC and with the subsection to read as follows:

312.1.1 Test Gauges. Tests required by this *code*, which are performed utilizing dial or digital gauges, shall be limited to gauges having the following pressure graduations or increments and be a grade 1A or better as per ANSI/ASME B40.100-2005.

Section 312.2, Drainage and vent water test, of the IPC is amended as follows:

312.2 Drainage and vent water test. ~~A~~ Prior to any concealment, a water test and subsequent inspection shall be applied to the drainage system either in its entirety or in sections. The first floor *DWV* system shall be retested and inspected after all fill is in place and foundation steel installed but prior to placement of concrete. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to the point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test, and each section shall be filled with water, but no section shall be tested with less than a 42 inch (1067 mm) head of water. In testing successive sections, at least the upper 10 feet (3048 mm) of the next preceding section shall be tested so that no joint or pipe in the building, except the uppermost 10 feet (3048 mm) of the system, shall have been submitted to a test of less than a 42 inch (1067 mm) head of water. This pressure shall be held for at least 15 minutes. The system shall then be tight at all points.

Section 312.10, Inspection and testing of backflow prevention assemblies, Subsection 312.10.1, Inspections, and Subsection 312.10.2, Testing, of the IPC are repealed and replaced with the following:

312.10 Inspection and testing of backflow prevention assemblies. The premise owner or responsible person shall have the backflow preventer assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation and at least on an annual schedule thereafter, or more often when required by the *code official*. The periodic testing shall be performed in accordance with the University of Southern California's procedures by a tester qualified in accordance with those standards.

Section [M] 314.2.1, Condensate disposal, of the IPC is repealed and replaced as follows:

[M] 314.2.1 Condensate disposal. Condensate disposal shall be in accordance with Chapter 34, Section 34-274 of the City Code of San Antonio. Condensate drains lines shall not decrease in size from the drain pan connection to the place of condensate disposal. Primary drain lines located in an unconditioned attic space shall be insulated with foam plastic rubber based insulation or other approved material with a minimum thickness of 3/8 inch. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope. Drain lines located in crawl spaces do not have to be insulated.

Section 401.3, Water conservation, of the IPC is repealed and replaced as follows:

401.3 Water conservation. The maximum discharge flow rates for *plumbing fixture* fittings shall be in accordance with applicable standards referenced in Chapter 13 and listed in Table 604.4, but in no case shall they exceed the maximum requirements of the Texas Commission of Environmental Quality (TCEQ), Chapter 372, titled "Environmental Performance Standards for Plumbing Fixtures" and/or the requirements set forth by these amendments.

Section 502.3, Water heaters installed in attics, of the IPC is amended by adding a new sentence at the beginning of the section that reads as follows:

502.3 Water heaters installed in attics. Storage type water heaters shall not be installed in an attic unless accessible from a door opening on the same floor level of the attic. Attics containing a water heater shall be . . .

Section 502, INSTALLATION, is being amended by adding a new section 506.6, Water heaters installed under stairways and landings, as follows:

502.6 Water heaters installed under stairways or landings. Electric water heaters are the only type that may be installed under stairways or landings.

Section 504.6, Requirements for discharge piping, of the IPC is amended by amending number 5 and adding number 14 to read as follows:

5. Discharge to ~~the floor, to the pan serving the water heater or storage tank, to~~ a waste receptor or to the outdoors. Discharge to the floor of a garage or basement shall only be allowed if *approved* by the *code official*.

14. Terminate to the exterior a minimum of 6 inches and a maximum of 12 inches above the finish grade.

Section 604.4, Maximum flow and water consumption, of the IPC is amended by deleting Exceptions 1 and 2.

Table 604.4, MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXTURE FITTINGS, of the IPC is amended as follows:

TABLE 604.4
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES[d] AND FIXTURE FITTINGS

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY[b]
Lavatory, private	~~2.2~~1.5 gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head[a]	~~2.5~~2.0 gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	~~1.0~~0.5 gallon per flushing cycle
Water closet[c]	1.6 gallons per flushing cycle

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m.
1 pound per square inch = 6.895 kPa.

a. A hand-held shower spray is a shower head. All associated heads shall be appropriate for the flow rate.
b. Consumption tolerances shall be determined from referenced standards.
c. Gravity flush water closets shall have a maximum average water consumption of 1.28 gallons per flushing cycle.
d. Where the Environmental Protection Agency has accepted that specific plumbing fixtures, by make and model, meet or exceed WaterSense standards, such fixtures installed will be from the most current listing available at the time of installation.

Section 604.8, Water-pressure reducing valve or regulator, of the IPC is amended by adding a Subsection 604.8.3 to read as follows:

604.8.3 Where a pressure reducing valve is installed, a thermal expansion tank shall also be required on the cold water supply to all water heaters. Where multiple water heaters are installed, a single expansion tank properly engineered and sized will be acceptable.

Section 604.9, Water hammer, of the IPC is amended by adding language to the end of the section as follows:

604.9 Water hammer. The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where quick-closing valves are utilized. Water-hammer arrestors shall be installed in accordance with the manufacturer's specifications. Water-hammer arrestors shall conform to ASSE 1010. Water-hammer arrestors shall be installed to protect all washing machines, kitchen sinks, dishwashers, tubs and shower locations from water hammer. A separate tub and shower set back to back may be served by a single set of water-hammer arrestors, provided that the continuation of the water line

from one fixture (where the arrestors are located) to the other fixture does not exceed 8 linear feet as measured along the pipe.

Tables 605.3, WATER SERVICE PIPE, and 605.4, WATER DISTRIBUTION PIPE, of the IPC are amended by removing type M and WM copper from both tables under copper or copper-alloy tubing as follows (the remainder of both tables are retained):

TABLE 605.3
WATER SERVICE PIPE

MATERIAL	STANDARD
Copper or copper alloy tubing (Type K, WK, L, or WL~~, M or WM~~)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447

TABLE 605.4
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Copper or copper alloy tubing (Type K, WK, L, or WL~~, M or WM~~)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447

Section 606.2, Location of shutoff valves, of the IPC is amended as follows:

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each fixture other than bathtubs and showers in one- and two-family residential *occupancies*, and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar *occupancies*.

~~2. On the water supply pipe to each sillcock.~~

~~3.~~2. On the water supply pipe to each appliance or mechanical equipment.

Section 607.2.1, Piping Insulation, of the IPC is amended by deleting the requirement that piping insulation be in accordance with the International Energy Conservation Code and by adding subsections 607.2.1.1 and 607.2.1.2 to read as follows:

607.2.1 Piping Insulation. ~~Circulating hot~~ Hot water system piping shall be insulated ~~in accordance with the *International Energy Conservation Code*~~ as follows:

607.2.1.1 Residential buildings. *Buildings* with a use classification of R-2, R-3, or R-4 as defined in the *International Building Code* and that are 3 stories or less shall be insulated to at least R-2. Circulating hot water systems shall include an automatic or readily *assessable* manual switch that can turn off the hot water circulating pump when the system is not in use. All

noncirculating hot water piping shall be insulated between the heating element and the end use fixture with R-4 sleeve insulation or with material *approved* by the *code official*.

Exceptions:

1. Runs 20 feet (6.1 meters) or less for noncirculating hot water systems.

2. Insulation is not required to be continuous through framing members.

607.2.1.2 Commercial buildings. Automatic circulating hot water systems for commercial *buildings* (all *buildings* not covered in the use classifications found in Section 607.2.1.1, above) shall be insulated with 1 inch (25 mm) of insulation having a conductivity not exceeding 0.27 Btu per inch/h x ft^2 x $^{\circ}F$ (1.53 W per 25 mm/m^2 x K). The first 8 feet (2438 mm) of piping in noncirculating systems served by equipment without integral heat traps shall be insulated with 0.5 inch (12.7 mm) of material having a conductivity not exceeding 0.27 Btu per inch/h x ft^2 x $^{\circ}F$ (1.53 W per 25 mm/m^2 x K).

Section 607.3, Thermal expansion control, of the IPC is amended by adding language at the end of that section as follows:

607.3 Thermal expansion control. A means of controlling increased pressure caused by thermal expansion shall be provided where required in accordance with Sections 607.3.1 and 607.3.2. Thermal expansion control is limited to the use of expansion tanks (per water conservation requirements of 1998, Ordinance 89128). Also, see Section 604.8 as amended by the *city*.

Section 608.1, General, is amended by adding a sentence to identify the pipe color for potable water as follows:

608.1 General. A *potable water* supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from nonpotable liquids, solids or gases being introduced into the *potable water* supply through cross-connections or any other piping connections to the system. *Backflow preventer* applications shall conform to Table 608.1, except as specifically stated in Sections 608.2 through 608.16.10. When two or more water distribution systems, one *potable water* and the other nonpotable water, are installed, each system shall be identified either by color markings or metal tags. The color of the pipe identification for *potable water* shall be green background with white lettering and shall be discernable and consistent throughout the *building*. The color of pipe identification for nonpotable water shall be in accordance with Section 608.8.

Section 608.8, Identification of nonpotable water, is amended by adding the words "and on all properties" to the first sentence. The remainder of the sections stays the same as follows:

608.8 Identification of nonpotable water. ~~In buildings where~~ Where nonpotable water systems are installed, the piping conveying the nonpotable water shall be identified either by color marking or metal tags in accordance with Section 608.8.1 through 608.8.3. All nonpotable water outlets . . .

Section 608.8.2, Color, for the identification of nonpotable water is amended as follows:

608.8.2 Color. The color of the pipe identification shall be discernable and consistent throughout the piping system. ~~*building*~~. ~~The color purple shall be used to identify reclaimed, rain and gray water distribution systems.~~ These colors and their warning message are as follows: nonpotable water – yellow background with black lettering with the words "Caution: Nonpotable Water, Do Not Drink" and reclaimed water – purple (Pantone color #512) background with black lettering with the words "Caution: Reclaimed Water, Do Not Drink".

Section 608.14, Locations of backflow preventers, of the IPC is deleted and replaced with the following:

608.14 General Requirements for Backflow Prevention Devices.

608.14.1 All assemblies shall conform to listed standards and be acceptable to the *code official*, with jurisdiction over the selection and installation of backflow prevention assemblies.

608.14.2 Where more than one (1) *backflow preventer* is installed on a single premise, and the *backflow preventers* are installed in one location, each separate *backflow preventer* shall be permanently identified by the permittee in an *approved* manner.

608.14.3 The premise owner or responsible person shall have the *backflow* prevention assembly tested by a *state licensed backflow assembly tester* at the time of installation, repair, or relocation and at least on an annual schedule thereafter, or more often when required by the *code official*. The periodic testing shall be performed in accordance with *approved* procedures.

608.14.4 Access and clearance shall be provided for the required testing, maintenance, and repair. For *RP devices*, access and clearance shall require a minimum of 1 foot (305 mm) between the lowest portion of the assembly and grade, floor, or platform. Installations elevated more than 5 feet (1524 mm) above the floor or grade shall be provided with a permanent platform capable of supporting a tester or maintenance person. All *backflow preventers* shall be

installed in accordance with the "Backflow Prevention Assembly Installation Standards" provided by the *code official*. This document is adopted with these amendments and shall be kept on file with the City Clerk's Office along with these amendments.

608.14.5 Direct connections between *potable water* piping and sewer-connected wastes shall not exist under any condition with or without backflow protection. Where potable water is discharged to the drainage system, it shall be by means of an approved airgap of two (2) pipe diameters of the supply inlet, but in no case shall the gap be less than 1 inch (25 mm). Connection may be made to the inlet side of a trap provided that an approved vacuum breaker is installed not less than 6 inches (152 mm), or the distance according to the device's listing, above the flood-level rim of such trapped fixture, so that at no time will any such device be subjected to any back-pressure.

608.14.6 *Backflow preventers* for hot water over 110°F (43.3°C) shall be a type designed to operate at temperatures of 110°F (43.3°C) or more without rendering any portion of the assembly inoperative.

608.14.7 Fixtures, appliances, or appurtenances with integral *backflow preventers* or integral *air gaps* manufactured as a unit shall be installed in accordance with their listing requirements and the manufacturers' instructions.

608.14.8 *Backflow preventers* shall be protected from freezing with an outdoor enclosure or by a method acceptable to the *code official*.

608.14.9 All drain lines serving *backflow preventers* shall be sized in accordance with the discharge rates of the manufacturers' flow charts of such devices or assemblies.

608.14.10 Design and installation of *plumbing* fixtures. *Plumbing* fixtures shall be installed such that fixture fittings, complying with the backflow prevention requirements of ASME A112.18.1, do not have these requirements compromised by the designated fixture fitting mounting surface.

Section 608.16, Connections to potable water supply, of the IPC has Subsections 608.16.5, 608.16.6, 608.16.8 and 608.16.9 amended to read as follows:

608.16.5 Connections to lawn irrigation systems. The *potable* water supply to lawn irrigation systems shall be protected against *backflow* by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double–check valve assembly or a reduced pressure principle *backflow preventer*. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the *potable water* supply shall be protected against *backflow* by a reduced pressure principle *backflow preventer*.

608.16.6 Connections subject to backpressure. Where a *potable water* connection is made to a nonpotable line, fixture, tank, vat, pump or other equipment subject to backpressure, the *potable water* connection shall be protected by a reduced pressure principle *backflow preventer.* The irrigation system shall be designed and installed in accordance with City Ordinance #97250.

608.16.8 Portable cleaning equipment. Where the portable cleaning equipment connects to the water distribution system, the water supply shall be protected against *backflow* in accordance with Section 608.13.1, 608.13.2, ~~608.13.3,~~ or 608.13.7.~~, or 608.13.8.~~

608.16.9 Dental pump equipment. Where dental pumping equipment connects to the water distribution system, the water supply system shall be protected against *backflow* in accordance with Section 608.13.1, or 608.13.2.~~, 608.13.5, 608.13.6 or 608.13.8.~~

Section 608.17, Protection of individual water supplies, of the IPC and its subsections are deleted and replaced with the following:

608.17 Protection of individual water supplies. Refer to *TCEQ* requirements not found in this *code*.

Section 702.3 Building sewer pipe, of the IPC is amended to read as follows:

702.3 Building sewer pipe. ~~*Building sewer* pipe shall conform to one of the standards listed in Table 702.3.~~ *Building sewer* pipes 3 inch and 4 inch shall be a minimum of Schedule 40 PVC. Sewer lines 6 inch and larger shall be a minimum of SDR 35 PVC. Cast-iron and Stainless steel 316L may also be used for all sizes.

Table 702.3, BUILDING SEWER PIPE, of the IPC is deleted.

Section 705.5.3, Mechanical joint coupling, Section 705.7.1, Mechanical joints, Section 705.8.1, Mechanical joints, Section 705.14.1, Mechanical joints, and Section 705.16.1, Mechanical joints, of the IPC are amended by adding a sentence to the end of each listed section to read as follows:

For underground or under slab installations, the mechanical joint coupling shall be a wide-bodied coupling.

Exception, of Section 706.3, Installation fittings, is deleted as follows:

~~**Exception:** Back-to-back water closet connections to double sanitary tees shall be permitted where the horizontal *developed length* between the outlet of the water closet and the connection to the double sanitary tee pattern is 18 inches (457 mm) or greater.~~

Section 706.4, Heel- or side-inlet quarter bends, is amended to read as follows:

706.4 Heel- ~~or side~~-inlet quarter bends. Heel-inlet quarter bends, in the upright position, shall be an acceptable means of connection for single fixtures, however, they cannot be used for wet venting.~~, except where the quarter bend serves a water closet. A low-heel inlet shall not be used as a wet-vented connection. Side-inlet quarter bends shall be an acceptable means of connection for drainage, wet venting and *stack* venting arrangements.~~

SECTION 708, CLEANOUTS, of the IPC is amended by deleting Section 708.3.3 in its entirety and replacing that section with new code language. Section 708.3.5, Building drain and building sewer junction, is amended. Section 708.3.7, Individual fixture, is a new subsection being added. And a new Section 708.10, Traffic-bearing areas, is added. All to read as follows:

708.3.3 Changes of direction. An additional cleanout shall be provided in a drainage line for each aggregate horizontal change of direction exceeding one hundred and thirty-five (135) degrees (2.36 rad).

Section 708.3.5, Building drain and building sewer junction, of the 2009 IPC is amended to read as follows:

708.3.5 Building drain and building sewer junction. There shall be a cleanout near the junction of the *building drain* and the *building sewer*. The cleanout shall be either inside or outside the building wall and shall be brought up to the finished ground level or to the basement floor level. An *approved* two-way cleanout is allowed to be used at this location to serve as a required cleanout for both the *building drain* and the *building sewer*. ~~The cleanout at the junction at the junction of the *building drain* and *building sewer* shall not be required if the cleanout on a 3-inch (76 mm) or larger diameter soil *stack* is located within a *developed length* of 10 feet (3048 mm) of the *building drain* and *building sewer* connection~~. The minimum size of he cleanout at the junction of the *building drain* and the *building sewer* shall comply with Section 708.7

708.3.7 Individual fixture. All washing machines, kitchen sinks and urinals shall have an accessible clean out. The washing machine shall have the clean out installed on the vent riser and above the top of the fixture or appliance.

708.10 Traffic-bearing areas. Cleanouts located in traffic-bearing areas shall be installed with a vehicle traffic-bearing box. The box shall be set in a concrete slab, extending at least 12 inches from the perimeter of the cleanout. The concrete slab shall be no less than 6 inches thick and shall have a compressive strength of not less than 2,500 psi.

TABLE 709.1, DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS, of the 2009 IPC amends only the minimum trap size for showers with a flow rate of 5.7 gpm or less. The remainder of the table is not amended:

TABLE 709.1
DRAINAGE FIXTURE UNITS FOR FIXTURES AND GROUPS

FIXTURE TYPE	DRAINAGE FIXTURE UNIT VALUE AS LOAD FACTORS	MIMIMUM SIZE OF TRAP (Inches)
Shower (based on the total flow rate through showerheads and body sprays) Flow rate: 5.7 gpm or less	2	2 ~~1~~ ½

SECTION 710, DRAINAGE SYSTEM SIZING, of the IPC is amended by deleting in their entirety Sections 710.1.1, Horizontal stack offsets, and 701.1.2, Vertical stack offsets, and adding Section 710.3, Minimum sewer size, and Section 710.4, Sewers over the Edwards Recharge Zone, to read as follows:

710.3 Minimum sewer size. No *building sewer* within private property shall be smaller than the *building drain*, but in no case smaller than three (3) inches (76 mm).

710.4 Sewers over Edwards Recharge Zone. Sewers over Edwards Recharge Zone shall be installed in accordance with any applicable *TCEQ* requirements and in accordance with the requirements as provided in the *SAWS* Utility Service Regulations.

SECTION 711, OFFSETS IN DRAINAGE PIPING IN BUILDINGS OF FIVE STORIES OR MORE, is deleted in its entirety.

TABLE 710.1(1), BUILDING DRAINS AND SEWERS, of the IPC is amended for 1 ½ inch and 2 inch diameter pipe and a Note b is added. The remainder of the IPC table is not amended.

TABLE 710.1(1)
BUILDING DRAINS AND SEWERS

DIAMETER OF PIPE (inches)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS CONNECTED TO ANY PORTION OF THE BUILDING SEWER, INCLUDING BRANCHES OF THE BUILDING DRAIN [a]			
	Slope per foot			
	1/16 inch	1/8 inch	1/4 inch	1/2 inch
1 1/2	----	----	1 ~~3~~	2[b] ~~3~~
2	----	----	10 ~~21~~	15 ~~26~~

b. Except sinks, urinals and dishwashers.

TABLE 710.1(2), HORIZONTAL FIXTURE BRANCHES AND STACKS[a], is deleted and replaced with the following:

TABLE 710.1(2)
MAXIMUM DRAINAGE FIXTURE UNITS (dfu)
OF VERTICLE DRAINING PIPING

DIAMETER OF PIPE[1] (inches)	MAXIMUM NUMBER OF DRAINAGE FIXTURE UNITS (dfu)
1 ¼	1
1 ½	2[2]
2	16[3]
2 ½	32[3]
3	48[4]
4	256
5	600
6	1,380
8	3,600
10	5,600
12	8,400

1 Excluding trap arm.
2 Except sinks, urinals, and dishwashers.
3 Except six-unit traps or water closets.
4 Only six (6) water closets or six-unit traps allowed on any vertical pipe or stack; and not to exceed five (5) water closets or six-unit traps on any horizontal branch or drain.

Section 712.3.1, Sump pump, of the IPC is amended by adding two sentences and an exception to read as follows:

712.3.1 Sump pump. The sump pump capacity and head shall be appropriate to anticipated use requirements. All such sumps and receiving tanks shall be automatically discharged and shall be provided with dual pumps or ejectors arranged to function alternately in normal use and independently in case of overload or mechanical failure. The pumps shall have an audio and visual alarm, readily accessible, that signals pump failure or an overload condition. The lowest inlet shall have a minimum clearance of two (2) inches (51 mm) from the high-water or "starting" level of the sump.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate

means of egress that are roughed-in independently of each other may have a single pump system with or without alarm.

Section 712, Sumps and Ejectors, of the IPC is amended by adding a new Subsection 712.5, Dual pump system, as follows:

712.5 Dual pump system. All sumps shall be automatically discharged and, when in any 'public use' occupancy where the sump serves more than 4 fixture units, shall be provided with dual pumps or ejectors arranged to function independently in case of overload or mechanical failure.

Section 715.1, Sewage backflow, of the IPC is amended to read as follows:

715.1 Sewage backflow. Where ~~the flood level rims of~~ plumbing fixtures are installed on a floor with a finished floor elevation below the elevation of the manhole cover of the next upstream manhole in the *public sewer,* such fixtures shall be protected by a backwater valve installed in the *building drain*, or horizontal *branch* serving such fixtures. Plumbing fixtures ~~having flood level rims~~ installed on a floor with a finished floor elevation above the elevation of the manhole cover of the next upstream manhole in the *public sewer* shall ~~not~~ discharge downstream of the ~~through a~~ backwater valve.

Section 802.1.7, Commercial dishwashing machines, of the IPC is amended by adding an exception to read as follows:

802.1.7 Commercial dishwashing machines. The discharge from a commercial dishwashing machine shall be through an *air gap* or *air break* into a standpipe or waste receptor in accordance with Section 802.2.

Exception: Dishwashing machines that pump their contents directly to the outlet on the machine may be connected to the sanitary drain piping with a direct connection.

Section 903.3, Vent termination, of the IPC is amended to read as follows:

903.3 Vent termination. Vent stacks or stack vents shall terminate outdoors to the open air. ~~or to a stack-type air admittance valve in accordance with Section 917.~~

Section 904.1, Roof extension, of the IPC is amended by establishing the minimum number of inches above the roof that a vent will terminate as follows:

904.1 Roof extension. All open vent pipes that extend through a roof shall be terminated at least 6 ~~[NUMBER]~~ inches (152 mm) above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

SECTION 905, VENT CONNECTIONS AND GRADES, of the IPC is amended in Section 905.1, Connection, Section 905.4, Vertical rise of vent, and Section 905.6, Vent for future fixtures, to read as follows:

905.1 Connection. All individual~~,~~ *branch* ~~and circuit~~ vents shall connect to a vent *stack, stack vent*~~, air admittance valve~~ or extend to the open air.

905.4 Vertical rise of vent. Every dry vent shall rise vertically to a minimum of 6 inches (152 mm) above the flood level rim of the highest trap or trapped fixture being vented. When structural conditions require horizontal vents to be installed below the flood level rim of the fixture they serve, they shall have a cleanout installed on the riser in an accessible location.

Exception: Vents for interceptors located outdoors.

905.6 Vent for future fixtures. Where the drainage piping has been roughed-in for future fixtures, a rough-in connection for a vent shall be installed. The vent size shall be not less than one-half the diameter of the rough-in drain to be served. The vent rough-in shall connect to the vent system.~~, or shall be vented by other means as provided for in this chapter.~~ The connection shall be identified to indicate that it is a vent.

TABLE 906.1, MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT, is amended as follows:

TABLE 906.1
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1 ¼	¼	3 ~~5~~
1 ½	¼	4 ~~6~~
2	¼	6 ~~8~~
3	1/8	12
4	1/8	16

Section 909.1, Horizontal wet vent permitted, of the IPC is amended by adding a sentence at the end of the paragraph to read as follows:

Water closet drains shall be at the lowest downstream section of the horizontal wet vented section of piping with all other wet vented fixtures connected upstream of the water closet drain.

SECTION 911, CIRCUIT VENTING, of the IPC is deleted.

SECTION 912, COMBINATION DRAIN AND VENT SYSTEM, of the IPC is amended in Section 912.2.2, Connection, by repealing the first sentence of that section and

replacing it with a new sentence to read as follows (remainder of section is not amended):

> **912.2.2 Connection.** ~~The combination drain and vent system shall be provided with a dry vent connected at any point within the system or the system shall be connected to a horizontal drain that is vented in accordance with one of the venting methods specified in this chapter.~~ The combination drain and vent system shall have a minimum of two vents, one at the start of the system and one at the end of the system before the last fixture. Combination drain and vent systems connecting to . . .

Section 913.2, Vent connection, and Section 913.3, Vent installation, of the IPC are amended to read as follows:

> **913.2 Vent connection.** The island fixture vent shall connect to the *fixture drain* as required for an individual or common vent. The vent shall rise vertically to above the drainage outlet of the fixture being vented before offsetting horizontally or vertically downward. The return bend used the under the drain board shall be a one piece fitting or an assembly of a 45 degree, 90 degree and a 45 degree elbow in the order named. The vent or *branch* vent for multiple island fixture vents shall extend to a minimum of 6 inches (152 mm) above the highest island fixture being vented before connecting to the outside vent terminal.
>
> **913.3 Vent installation below the fixture flood level rim.** The vent located below the *flood level rim* of the fixture being vented shall be installed as required for drainage piping in accordance with Chapter 7, except for sizing. The vent shall be sized in accordance with Section 916.2. The lowest point of the island fixture vent shall connect full size to the drainage system. The connection shall be to a vertical drain pipe or to the top half of a horizontal drain pipe and shall include a foot vent off of the vertical vent prior to connection to the vertical drain pipe or to the top half of a horizontal drain pipe. The foot vent shall be routed to the nearest wall and either run independently to the atmosphere or connect to another vent. Cleanouts shall be provided in the island fixture vent to permit rodding of all vent piping located below the *flood level rim* of the fixtures. Rodding in both directions shall be permitted through a cleanout.

SECTION 915, VENTS FOR STACK OFFSETS, of the IPC is deleted.

SECTION 917, AIR ADMITTANCE VALVES, of the IPC is deleted.

Section 1003.2, Approvals, of the IPC is amended by adding a paragraph at the end to read as follows:

> All interceptors shall be stamped or labeled by the manufacturer with an indication of its size in gallons or its full discharge rate in gallons per minute (gpm).

The full discharge rate to such an interceptor shall be determined at full flow. Each interceptor shall be rated equal to or greater than the incoming flow.

Section 1003.3.1 Grease interceptors and automatic grease removal devices required, of the IPC are amended as follows:

1003.3.1 Grease interceptors and automatic grease removal devices required. A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotels kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers ~~without prerinse sinks~~. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged.

Section 1003.3.2 Food waste grinders, of the IPC is amended as follows:

1003.3.2 Food waste grinders. ~~Where food waste grinders connect to grease interceptors, a~~ All commercial food waste grinder/disposal units shall be connected to and discharge directly into a gravity grease interceptor. A solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder.

Section 1003.3.4.1 Grease interceptor capacity, of the IPC is amended by adding subsections 1003.3.4.1.1, Grease interceptor and hydromechanical grease interceptor sizing, and 1003.3.4.1.2, Gravity grease interceptor sizing, to read as follows:

1003.3.4.1.1 Grease interceptor and hydromechanical grease interceptor sizing. Grease interceptors and hydromechanical grease interceptors shall comply with Table 1003.3.4.1.1.

TABLE 1003.3.4.1.1
GREASE INTERCEPTOR AND HYDROMECHANICAL GREASE INTERCEPTOR SIZING CHART

DFU's	INTERCEPTOR (gpm)
8	20
10	25
13	35
20	50
35	75

172	100
216	150
342	200
428	250
576	350
720	500

1003.3.4.1.2 Gravity grease interceptor sizing. Gravity grease interceptors shall comply with Table 1003.3.4.1.2.

TABLE 1003.3.4.1.2
GRAVITY GREASE INTERCEPTOR SIZING CHART

DFU's	INTERCEPTOR (gallons)
8	500
21	750
35	1,000
90	1,250
172	1,500
216	2,000
307	2,500
342	3,000
428	4,000
576	5,000
720	7,500
2112	10,000
2640	15,000

Section 1003.5, Sand interceptors in commercial establishments, is amended by adding Subsection 1003.5.1, Where required, to read as follows:

1003.5.1 Where required. Sand interceptors shall be installed in the drainage systems of the following establishments: garages, car washes, service stations, or any place of business where heavy solids or solids greater than ½ inch may be introduced into the sanitary sewer system. The sizing criteria for a sand interceptor shall be based on the required GPM x 12-minute retention times to obtain the tank size in gallon capacity.

Section 1003.6 Laundries, of the IPC is amended by adding the following text to the end of the paragraph:

1003.6 Laundries. Laundry facilities not installed within an individual dwelling unit or intended for individual family use shall be equipped with an interceptor with a wire basket or similar device, removable for cleaning, that prevents passage into the

drainage system of solids ½ inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system. A professional engineer may design for specific operational requirements; however, the plans must be submitted with a professional engineer's seal for approval. The design shall be based on a 12-minute retention time.

Section 1003.9, Venting of interceptors and separators, of the IPC is amended by adding the following sentence to the end of the paragraph:

. . . subject to a loss of trap seal. Gravity type interceptors and separators shall have a minimum 2-inch relief vent on the tank itself.

SECTION 1003 INTERCEPTORS AND SEPARTATORS, of the IPC is amended by adding Sections 1003.11, Automatic car washes, and 1003.12, Silver recovery units, 1003.13, Neutralizing devices, and 1003.14, Solid interceptors, to read as follows:

1003.11 Automatic car washes. Automatic car washes (with high pressure sprays and/or brushes) shall install an interceptor no small than 50 gallons per minute for a 4-bay vehicle wash. The size of the interceptor shall increase 10 gallons per minute for each additional wash bay over 4. Single bay or portable washer type vehicle washes shall install an interceptor no smaller than 20 gallons per minute. The sizing criteria for automatic car washes shall be based on the flow rate in gallons per minute times a 12-minute retention time.

1003.12 Silver recovery units. Silver recovery units shall be installed in waste line(s) leading from x-ray processing, photographic processing, and/or any procedures in establishments such as medical labs, photo finishers, printers, graphic arts production facilities, hospital, veterinary hospitals, or other establishments where silver may be introduced into the sanitary sewer system.

1003.13 Neutralizing devices. In no case shall corrosive liquids, spent acids, or other harmful chemicals which might destroy or injure a drain, sewer, soil or waste pipe, or which might create noxious fumes, discharge into the sanitary sewer system without being thoroughly neutralized by passing through a properly constructed and *approved* neutralizing medium, consisting of limestone or marble chips, so as to make its contents non-injurious before discharge into the *sanitary sewer* system.

1003.14 Solid interceptors. Solid interceptors shall be installed when pretreatment of waste streams is necessary to prevent solids greater than ½ inch (12.7 mm) in diameter, which may cause line stoppage, from entering the *sanitary sewer* system.

SECTION 1004, MATERIALS, JOINTS AND CONNECTIONS, of the IPC is amended by adding Section 1004.2, Sample well, to read as follows:

1004.2 Sample well. An effluent sampling well for all interceptors shall be required. The sample well shall have a riser a minimum of 6 inches (153 mm) in diameter and

shall be installed after the confluence of all wasted streams from the facility and prior to discharging into the *sanitary sewer* collection system. The well shall be perpendicular to the effluent lateral to allow observation of the flow stream and provide for sampling of waste water.

APPENDIX C, GRAY WATER RECYCLING SYSTEMS, of the IPC is amended by amending the appendix title and incorporating all of the current text under PART 1, GRAY WATER RECYLING SYSTEMS, to read as follows:

APPENDIX C
GRAY WATER RECYCLING SYSTEMS AND RECLAIMED/RECYCLED WATER SYSTEMS

PART 1
GRAY WATER RECYCLING SYSTEMS

Section C101.1 Scope, of the IPC is amended to read as follows:

C101.1 Scope. The provisions of Part 1 of this appendix shall govern the materials, design construction and installation of gray water systems for flushing of water closets and urinals and for subsurface landscape irrigation (see Figures 1 and 2).

Section C102.3, Makeup water, of the IPC is amended to read as follows:

C102.3 Makeup water. ~~Potable water shall be supplied as a source of makeup water for the gray water system. The potable water supply shall be protected against backflow in accordance with Section 608.~~ When *gray water* systems are supplied with makeup water from either a potable source or from a *recycled water* source, the *potable water* makeup shall be protected by both an *air gap* and an *RP device* in accordance with Section 608. There shall be a full-open valve located on the makeup water supply line to the collection reservoir.

Section C102.4, Coloring, and Section C103.5, Coloring, are hereby deleted.

APPENDIX C, GRAY WATER RECYCLING SYSTEMS AND RECLAIMED/RECYCLED WATER SYSTEMS, of the IPC is amended by adding a PART 2, RECLAIMED/RECYCLED WATER SYSTEMS, to read as follows:

PART 2
RECLAIMED/RECYCLED WATER SYSTEMS

SECTION C104
GENERAL

C104.1 Scope. The provisions of Part 2 of this appendix shall govern the materials, design construction and installation of reclaimed/recycled water systems for flushing

of water closets and urinals, for trap primers for floor drains and floor sinks and for subsurface landscape irrigation. Use is limited to those fixtures that are located in nonresidential buildings. Fixtures within residential buildings are excluded from the list of approved uses. The reclaimed/recycled water system shall have no connection to any potable water system, with or without mechanical backflow prevention devices. If reclaimed/recycled water is utilized on the premises, all potable water supplies shall be provided with appropriate backflow protection, as required by the *code official*. Reclaimed/recycled water is allowed in all nonresidential buildings to supply fixtures as specified in this appendix, except where prohibited by statute, regulation, or ordinance.

Exception: Reclaimed water such as rainwater harvesting and A/C condensate shall also be *approved* for residential lawn irrigation applications.

C104.2 Permits. Permits shall be required in accordance with Section 106.

C104.3 Installation. Except as provided for in Appendix C, all systems shall comply with the provisions of the *International Plumbing Code.*

C104.3.1 Hose bibbs. Hose bibbs shall not be allowed on reclaimed/recycled water piping systems.

Exception. On reclaimed water systems, a hose bibb may be used when identified with signage in accordance with Section 608.8.

C104.3.2 The reclaimed/recycled water system and the potable water system within the building shall be provided with the required appurtenances (valves, air/vacuum relief valves, etc.) to allow for deactivation or drainage as may be required by Appendix C.

C104.3.3 Reclaimed/recycled water pipes shall not be placed in the same trench as potable water pipes. A 2-foot (610 mm) horizontal separation shall be maintained between pressurized, buried reclaimed/recycled water and potable water piping. Buried potable water pipes crossing pressurized reclaimed/recycled water pipes shall be placed in a minimum of 12 inches (305 mm) above the reclaimed/recycled water pipes and shall have a PVC sleeve that extends a minimum of 2 feet either side of the pipe crossing. Reclaimed/recycled water pipes placed in the same trench or crossing building sewer or drainage piping shall be installed in compliance with Section 603.2. Reclaimed/recycled water pipes shall be protected in the same manner as potable water pipes.

C104.3.4 Makeup water. When potable makeup water is needed for a reclaimed/recycle system, the potable water shall be protected by both an air gap and an RP backflow device in accordance with Section 608.

C104.3.5 Sizing. Reclaimed/recycled water piping shall be sized as in accordance with this *code* for the sizing of potable water piping.

C104.4 Pipe materials and identification. Reclaimed/recycled water piping and fittings shall be as required in this code for potable water piping and fittings. All reclaimed/recycled water pipe and fittings shall be continuously wrapped with purple-colored Mylar tape. The wrapping tape shall have a minimum nominal thickness of 0.0005 inch (0.127 mm) and a minimum width of 2 inches (51 mm). Tape shall be fabricated of polyvinyl chloride with a synthetic rubber adhesive and a clear polypropylene protective coating or *approved* equal. The tape shall be purple (Pantone color #512) and shall be imprinted in nominal 1/2 inch (12.7 mm) high, black uppercase letters with the words "**CAUTION: RECLAIMED WATER, DO NOT DRINK.**" The lettering shall be imprinted in two (2) parallel lines, such that after wrapping the pipe a full line of text shall be visible. Wrapping tape is not required for buried PVC pipe manufactured with purple color integral to the plastic and marked on opposite sides to read "**CAUTION: RECLAIMED WATER, DO NOT DRINK**" in intervals not to exceed 3 feet (914 mm). All valves, except fixture supply control valves, shall be equipped with a locking feature. All mechanical equipment that is appurtenant to the reclaimed/recycled water system shall be painted purple to match the Mylar wrapping tape.

C104.5 Tests and inspections. Reclaimed/recycled water piping shall be tested as outlined in this code for testing of *potable water* piping.

C104.5.1 An initial and subsequent annual *cross connection* inspection and test shall be performed on the potable and reclaimed/recycled water systems and any other water systems as follows:

C104.5.1.1 Visual Dual System Inspection. Prior to commencing the *cross connection* testing, a dual system inspection shall be conducted as follows by the *code official* and other authorities having jurisdiction:

1. Meter locations of the recycled water and *potable water* lines shall be checked to verify that no modifications were made, and that no *cross connections* are visible.

2. All pumps and equipment, equipment room signs, and exposed piping in the equipment room shall be checked.

3. All valves shall be checked to ensure that valve lock seals are still in place and intact. All valve control door signs shall be checked to verify that no signs have been removed.

C104.5.1.2 Cross connection test. The following procedure shall be followed by the applicant in the presence of the *code official* and other authorities having jurisdiction to determine whether a *cross connection* occurred:

1. The *potable wate*r system shall be activated and pressurized. The reclaimed/recycled water system shall be shut down and completely drained.

2. The *potable water* system shall remain pressurized for a minimum period of time specified by the *code official* while the reclaimed/recycled water system is empty. The minimum period the reclaimed/recycled water system is to remain depressurized shall be determined on a case-by-case basis, taking into account the size and complexity of the potable and reclaimed/recycled water distribution systems, but in no case shall that period be less than one (1) hour.

3. All fixtures, potable and reclaimed/recycled, shall be tested and inspected for flow. Flow from any reclaimed/recycled water system outlet shall indicate a *cross connection*. No flow from a potable water outlet would indicate that it may be connected to the reclaimed/recycled water system.

4. The drain on the reclaimed/recycled water system shall be checked for flow during the test and at the end of the period.

5. The *potable water* system shall then be completely drained.

6. The reclaimed/recycled water system shall then be activated and pressurized.

7. The reclaimed/recycled water system shall remain pressurized for a minimum period of time specified by the *code official* while the *potable water* system is empty. The minimum period the *potable water* system is to remain depressurized shall be determined on a case-by-case basis, but in no case shall that period be less than one (1) hour.

8. All fixtures, potable and reclaimed/recycled, shall be tested and inspected for flow. Flow from any *potable water* system outlet shall indicate a *cross connection*. No flow from a reclaimed/recycled water outlet would indicate that it may be connected to the *potable water* system.

9. The drain on the *potable water* system shall be checked for flow during the test and at the end of the period.

10. If there is no flow detected in any of the fixtures that would have indicated a *cross connection*, the *potable water* system shall be repressurized.

C104.5.1.3 In the event that a *cross connection* is discovered, the following procedure, in the presence of the *code official*, shall be activated immediately:

1. Reclaimed/recycled water piping to the building shall be shut down at the meter, and the reclaimed/recycled water riser shall be drained.

2. *Potable water* piping to the building shall be shut down at the meter.

3. The *cross connection* shall be uncovered and disconnected.

4. The building shall be retested following procedures listed in subsections C104.5.1.1 and C104.5.1.2 above.

5. The potable water system shall be chlorinated with fifty (50) ppm chlorine for twenty-four (24) hours.

6. The *potable water* system shall be flushed after twenty-four (24) hours, and a standard bacteriological test shall be performed. If test results are acceptable, the *potable water* system may be recharged.

C104.5.2 An annual inspection of the reclaimed/recycled water system, following the procedures listed in subsection C104.5.1.1, shall be required. Annual cross connection testing, following the procedures listed in subsection C104.5.1.2, shall be required by the *code official*, unless site conditions do not require it. In no event shall the test occur less often than once in four (4) years. Alternate testing requirements may be allowed by the *code official* for institutional buildings.

C104.6 Approved Uses of Reclaimed/Recycled Water. Reclaimed/recycled water is allowed in all nonresidential buildings to supply fixtures as specified in this appendix, except where prohibited by statute, regulation, or ordinance.

Exception: *Reclaimed water* such as rainwater harvesting and A/C condensate shall also be approved for residential lawn irrigation applications.

C104.7 Signage.

C104.7.1 Room Entrance Signs. All installations using reclaimed/recycled water for water closets and/or urinals shall be identified with the proper signage. Each sign shall contain 1/2 inch (12.7 mm) letters of a highly visible color on a contrasting background. The location of each sign shall be such that the sign shall be visible to all users. The number and location of signs shall be approved by the *code official* and shall contain the following text:

TO CONSERVE WATER, THIS
BUILDING USES RECLAIMED WATER
TO FLUSH TOILETS AND URINALS.

C104.7.2 Equipment Room Signs. Each equipment room containing reclaimed/recycled water equipment shall have a sign posted with the following wording in one 1 inch (25.4 mm) letters on a purple background and shall contain the following text:

CAUTION - RECLAIMED WATER.
DO NOT DRINK. DO NOT CONNECT
TO DRINKING WATER SYSTEM.

The following sign shall be posted in a location that is visible to anyone working on or near reclaimed/recycled water equipment:

NOTICE: CONTACT BUILDING
MANAGEMENT BEFORE PERFORMING
ANY WORK ON THIS WATER SYSTEM.

C104.7.3 Where tank-type water closets are flushed with reclaimed/recycled water, the tank shall be labeled:

RECLAIMED WATER
DO NOT DRINK

C104.7.4 Valve Access Door Signs. Each reclaimed/recycled water valve within a wall shall have its access door into the wall equipped with a warning sign approximately six (6) inches by six (6) inches (152 mm x 152 mm) with wording in one half (1/2) inch (12.7 mm) letters on a purple background. The size, shape, and format of the sign shall be substantially the same as that specified in subsection (B) above The signs shall be attached inside the access door frame and shall hang in the center of the access door frame. This sign requirement shall be applicable to any and all access doors, hatches, etc., leading to reclaimed/recycled water piping and appurtenances.

C104.7.5 Valve Seals. Each valve or appurtenance shall be sealed in a manner approved by the Code Official after the reclaimed/recycled water system has been approved and placed into operation. These seals shall either be a crimped lead wire seal or a plastic breakaway seal which, if broken after system approval, shall be deemed conclusive evidence that the reclaimed/recycled water system has been accessed. The seals shall be purple with the words "**RECLAIMED WATER**" and shall be supplied by the reclaimed/recycled water purveyor or by other arrangements acceptable to the *code official*.

SECTION 5. Chapter 24 of the City Code of San Antonio, Texas, is amended by adopting the 2009 edition of the *International Fuel Gas Code***,** chapters 1 through 8 and appendices A through C, promulgated by the International Code Council as the minimum standard for the City of San Antonio. Said amendment is effected by the addition of a

new Article III entitled "Fuel and Gas Code" and corresponding sections under that article. Changes are identified by the underlined (added) language below:

ARTICLE III. FUEL AND GAS CODE

Sec. 24-15. *International Fuel Gas Code* adopted.

Chapters 1 through 8 and Appendices A through C of the International Code Council's 2009 edition of the *International Fuel Gas Code* are hereby adopted as the fuel gas code of the City of San Antonio.

SECTION 6. Local amendments to the adopted provisions of the 2009 edition of the *International Fuel Gas Code* are hereby adopted and Chapter 24 is amended by adding a new section 24-16 entitled "Local Amendments." To reflect these amendments, Article III, Section 24-16 of the City Code of San Antonio is amended by adding the underlined (added) language and striking (~~deleting~~) the language that follows:

Sec. 24-16. Local Amendments.

Section 101.2, Scope, of the IFGC is amended to delete the Exception as follows:

101.2 Scope. This code shall apply to the installation of fuel-gas *piping* systems, fuel gas appliances, gaseous hydrogen systems and related accessories in accordance with Sections 101.2.1 through 101.2.5.

~~**[Exception.** Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.]~~

Section 101.4, Intent, of the IFGC is amended to read as follows:

101.4 Intent. The purpose of this *code* is to provide minimum standard to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of *fuel gas* systems. The *code* shall be governed by common sense. An installation or design that is found to not comply with the provisions of the *code* shall not be deemed a violation if the installation or design conforms to the intent of the *code* as determined by the *code official*. If such determinations should be applicable to *fuel gas* installations in general, the *code official* shall publish the determination and include it in the next adoption of local amendments.

SECTION 103 (IFGC), DEPARTMENT OF INSPECTION, and Section 103.1, General, of the IFGC are amended to read as follows:

SECTION 103 (IFGC)

DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES ~~[INSPECTION]~~

103.1 ~~General.~~ Enforcement agency. The ~~Department of Inspection~~ Department of Planning and Development Services shall be the enforcement agency for the *International Fuel Gas Code*, ~~is hereby created and the executive official in charge~~ and the director thereof shall be known as the *code official* and building official.

Section 103.4, Liability, of the IFGC is amended by amending the last sentence of the second paragraph of that section to read as follows:

The *code official* or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code~~.~~, and any officer of the Department of Planning and Development Services, and appointees of the city, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.

Section 106.6, Fees, and subsections 106.6.1 through 106.6.3 of the IFGC are repealed in their entirety and replaced with a new Section 106.6, Fees, and various subsections to read as follows:

106.6. Fees.

106.6.1. Payment of Fees. A permit or registration shall not be valid until fees prescribed by City Ordinance have been paid. Nor shall an amendment to a permit or license be released until the additional fee, if any, has been paid.

106.6.2. Schedule of permit and registration fees. A fee for each permit or registration shall be paid as required, in accordance with the fee schedule as established by City Ordinance.

106.6.3. Work commencing before permit issuance. Any person who commences any work before obtaining the necessary permits shall be subject to an additional fee established by the fee schedule as established by City Ordinance.

106.6.4. Related fees. The payment of the fee for a registration or the construction, alteration, removal or demolition work done in connection with, or concurrently with, the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law or City Ordinance.

106.6.5. Refunds. The code official is authorized to establish a refund policy.

Section 202, DEFINITIONS, of the IFGC is amended by repealing definitions for "Code" and "Code Official" and adding the listed definitions below:

BOARD. The Plumbing and Fuel Gas Appeals and Advisory Board of the City of San Antonio also known as the Board of Appeals.

CITY. The City of San Antonio, Texas.

CODE. Chapter 24 of the City Code of San Antonio, Texas, also known as the *Plumbing and Fuel Gas Code of the City of San Antonio*, and any subsequent enactments, amendments and/or reenactment of chapter 24, City Code of San Antonio, Texas.

CODE OFFICIAL. The Director of the Department of Planning and Development Services or a duly authorized representative to act on his behalf. The code official shall also be known as the building official.

DEPARTMENT. The Department of Planning and Development Services of the City.

IFGC. The 2009 edition of the *International Fuel Gas Code*.

JOURNEYMAN PLUMBER. An individual, licensed with the State of Texas as a journeyman plumber, who works under the general supervision of a master plumber and who works on behalf of a plumbing contractor while performing "Plumbing Work" as defined in this code.

MASTER PLUMBER. An individual, licensed in the State of Texas as a master plumber who, on behalf of a plumbing contractor, performs "Plumbing Work" as defined by this code.

PIPE WELDER. A person who specializes in the welding of pipes and holds a valid certificate of competency from a recognized testing laboratory, based on the requirements of the ASME Boiler and Pressure Vessels code, Section IX.

PLUMBER'S APPRENTICE. An individual other than a *master plumber*, *journeyman plumber*, or *tradesman plumber*-limited license holder who, as the person's principal occupation, learns about and assists in the installation of *plumbing*, has fulfilled the requirements of and is registered by the board, and works under the supervision of a *master plumber* and the direct supervision of a licensed plumber.

PLUMBING WORK. Any labor or material used in installing, maintaining, or modifying a plumbing system and the appurtenances, apparatus, or equipment used in connection with the use of plumbing in, on, outside, or attached to a building, residence, structure, property, or premises.

STATE. Texas.

TCEQ. Texas Commission on Environmental Quality (http//:www.tceq.state.tx.us/).

TRADESMAN PLUMBER. An individual, licensed with the *state* as a tradesman plumber, who works under the general supervision of a *master plumber* and who works on behalf of a *plumbing* contractor while performing *plumbing work* on residential construction as defined in *State* Licensing Law.

The following sections of the International Fuel Gas Code (IFGC) are amended as follows:

Section 401.5, Identification, of the IFGC is amended to require tag identification of certain corrugated stainless steel tubing for gas as follows:

401.5 Identification. For other than steel pipe, exposed *piping* shall be identified by a yellow label marked "Gas" in black letters. The marking shall be spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be required on pipe located in the same room as the *appliance* served.

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

WARNING
1-5 psi gas pressure
Do Not Remove

Section 402.3, Sizing, of the IFGC is amended to require a minimum size for corrugated stainless steel tubing (CSST) as follows:

402.3 Sizing. Gas *piping* shall be sized in accordance with one of the following:

1. Pipe sizing tables or sizing equations in accordance with Section 402.4.

2. The sizing tables included in a *listed piping* system's manufacturer's installation instructions.

3. Other *approved* engineering methods.

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of ½ inch (18 EHD).

Section 404.10.1, Individual outside appliances, of the IFGC is deleted.

Section 404 PIPING SYSTEM INSTALLATION, of the IFGC is amended by adding Section 404.18, Welded pipe, and Section 404.19, Corrugated stainless steel tubing (CSST), to read as follows:

404.18 Welded pipe. All welded joints in piping system shall be welded by a certified *pipe welder* as defined in Section 202.

404.19 Corrugated stainless steel tubing (CSST).

404.19.1 Meter loop. Steel piping shall be required for the meter loop and into the wall and up through the top plate with a 90^{o} steel pipe fitting in the attic for the transition to CSST.

404.19.2 When CSST tubing passes behind stucco, plaster or areas where staples are used, it shall be protected by a continuous sleeve or AGA approved shield that is twice the diameter of the CSST tubing being protected.

Section 406.1, General, of the IFGC is amended as follows:

406.1, General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication and installation practices comply with the requirements of this code. The permit holder shall conduct the tests prescribed in Sections 406.1.1 through 406.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the code official when the piping system is ready for testing. The equipment, material, power, and labor necessary for the inspections and tests shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the prescribed pressure.

Section 406.4 Test pressure measurement, of the IFGC is amended by repealing the text of Section 406.4.1, Test pressure, and replacing it with new code language, amending Section 406.4.2, Test duration, and adding a new Section 406.4.3, Test gauges, all to read as follows:

406.4.1 Test pressures. The rough-in piping inspection shall include testing by closing all openings and subjecting the pipes to an air pressure that will support a column of mercury 15 inches (381 mm) in height or a 10 psi air test. For gas systems with pressures in excess of 14 inches of water column, the test pressure shall not be less than 1 ½ times the operating pressure for the system and shall hold this pressure for a minimum of 30 minutes.

The final inspection shall include a column of mercury 6 inches (152 mm) in height or of a 5 psi air test with appliance shut-off valves attached thereto. For gas systems with pressures in excess of 14 inches of water column, the test pressure shall not be less than 1 ½ times the operating pressure for the system and shall hold this pressure for a minimum of 30 minutes.

406.4.2 Test duration. Test duration shall be held for a length of time satisfactory to the code official, but in no case for less than 15 minutes. For welded piping, and for piping carrying gas at a pressure in excess of 14 inches of water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the code official, but in no case for less than 30 minutes. ~~not less than ½ hour for each 500 cubic feet (14 m^3) of pipe volume or fraction thereof. When testing a system having a volume less than 10 cubic feet (0.28 m^3) or a system in a single-family dwelling, the test duration shall be not less than 10 minutes.~~ The duration of the test shall not be required to exceed 24 hours.

406.4.3 Test gauges. Tests required by this *code* shall be limited to gauges with a grade 1A or better as per ANSI/ASME B40.100-2005.

Section 409.1, General, of the IFGC is amended by adding a new Section 409.1.4, Valves in CSST installations, as follows:

409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting or an equivalent support suitable for the size of the valves. The supports shall be of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration. The supports may not be installed more than 12 inches (304 mm) from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

Section 409.5 Appliance shutoff valve is amended by adding the following exception:

Exception: An outdoor appliance shall have a shutoff valve at the piping connection to the gas piping system.

Section 409.5.3, Located at manifold, of the IFGC is deleted.

Section [M] 614.6.1, Material and size, of the IFGC pertaining to domestic clothes dryer ducts, is amended as follows:

[M] 614.6.1 Material and size. Exhaust ducts shall have a smooth interior finish and shall be constructed of metal a minimum 0.016 inch (0.4 mm) thick. The

exhaust duct size shall be 4 inches (102 mm) nominal in diameter. The size of duct shall not be reduced along it developed length nor at the point of termination.

SECTION 7. Chapter 24, Article V, Section 24-13 entitled "Penalties" of the City Code of San Antonio, Texas is amended by adding the underlined (added) language and deleting the stricken (~~deleted~~) language as follows:

Sec. 24-13. Penalties.

A violation of any adopted provisions of Articles II and III ~~[Article II]~~ of this chapter shall be a Class C misdemeanor punishable by a fine not to exceed five hundred dollars ($500.00). Each day or portion thereof during which any violation is committed, continued or permitted shall constitute a separate offense for punishment purposes.

SECTION 8. All previous provisions of the 2006 Uniform Plumbing Code as adopted by the City of San Antonio, Texas, shall remain in full force and effect during the period for which they were enacted. Three (3) copies of both the 2009 International Fuel Gas Code and the 2009 International Plumbing Code with each code's respective local amendments have been filed in the office of the City Clerk for permanent record and inspection pursuant to section 17 of the City Charter.

SECTION 9. Should any Article, Section, Part, Paragraph, Sentence, Phrase, Clause, or Word of this ordinance, or any appendix thereof, for any reason, be held illegal, inoperative, or invalid or if any exception to or limitation upon any general provision herein contained be held to be unconstitutional or invalid or ineffective, the remainder shall, nevertheless, stand effective and valid as if it had been enacted and ordained without the portion held to be unconstitutional or invalid or ineffective.

SECTION 10. There is no financial impact as a result of the passage of this ordinance.

SECTION 11. No other provision of the City Code of San Antonio is amended hereby. All other provisions shall remain in effect.

SECTION 12. The City Clerk for the City of San Antonio is hereby directed to publish notice of this ordinance in a newspaper published in the City of San Antonio, Texas, as required by Article 2, Section 17 of the City Charter of the City of San Antonio.

SECTION 13. The publishers of the City Code of San Antonio are authorized to amend said Code to reflect the changes adopted herein, to correct typographical errors and to index, format and number paragraphs to conform to the existing code.

SECTION 14. This ordinance shall become effective January 1st, 2010.

PASSED AND APPROVED this 3rd day of September, 2009.

M A Y O R

ATTEST:

City Clerk

APPROVED AS TO FORM: _____

City Attorney